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**In the Abstract:**

Please replace the abstract of the application with the abstract provided below:

*Sub 1* The present invention relates generally to a peripheral marker or markers of blood brain barrier integrity and methods of using them in the diagnosis, prognosis, and treatment of a variety of diseases. The preferred embodiments of the present invention relate to methods, compositions, kits, and assays useful in determining the integrity or permeability of a blood brain barrier. The various embodiments of the present invention can be used to identify subjects at risk for developing a disease associated with increased permeability of the blood brain barrier, as well as to provide insight on the ability of an agent or agents to pass the blood brain barrier. Preferably, increased levels of S100 $\beta$  protein are used alone or in combination with other markers of diseased states in order to diagnose and prognosticate permeability of the BBB.